REMARKS/ARGUMENTS

Claims 1-33 remain in the application for further prosecution. The Applicant thanks the Examiner for allowance of claims 21-23.

§ 103 Rejections

Claims 1-20 and 24-33 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,419,702 (Beaty) in view of U.S. Patent No. 5,863,201 (Lazzara).

The Applicant respectfully suggests that a *prima facie* case of obviousness has not been established. The alleged motivation to combine the references to achieve the claimed invention is based on suggestions that fail to take into account the **entire** teachings of these references. More importantly, the reasoning set forth why the skilled artisan would be motivated to develop an implant analog that mimics the implant's configuration **below** the implant's upper surface is faulty in that it has not been derived (i) in the references themselves or (ii) in the knowledge generally available to one of ordinary skill in the art. MPEP § 2143.01.

The basis for the Examiner's obviousness rejection can be summarized as follows. Beaty teaches a modeling technique that includes soft tissue modeling material that is positioned around an implant analog, which is mounted in a stone model. Lazzara discloses an implant with a narrow-neck portion 14 and teaches that bone tissue **may** recede after the implant is placed in use after about 18 months. Therefore, according to the Examiner, it would have been obvious to modify Beaty's analog to include the narrow-neck portion 14 of Lazzara's implant.

The Office Action indicates that the Examiner "is of the position that one would desire a model of the Lazzara et al implant/jaw structure that mimics the 'steady state' structure found after 18 months so that a more accurate prosthesis may be constructed". Office Action, p. 4.

This begs the question -- what is the "steady state" condition for a particular patient? The answer is simple -- nobody knows. While the Examiner assumes this "steady state" condition is known so that the skilled artisan would know exactly how to develop the proposed groove in the analog, Lazzara specifically teaches that the amount of bone recession (or if recession will occur at all) is unknown **until about 18 months after the prosthetic tooth is used by the patient.** See Lazzara ("the overlying gingival tissue will in most cases be found to have receded a small distance" Col. 1, lines 37-38; "these observations indicate that the stopping level is not precisely the same in all cases" Col. 2, lines 6-8; "since the exact amount of bone recession that will occur in a given patient cannot be determined in advance of the event with precision" Col. 2, lines 28-29; "the exact dimension of the smooth region 20 cannot be precisely established for all cases." Col. 3, lines 29-30.)

Consequently, if the skilled artisan is supposedly desiring to have the implant analog match the implant's expected "steady state structure found after 18 months so that a more accurate prosthesis may be constructed," as suggested by the Examiner, then how would such a skilled artisan know where the patient's bone level will be 18 months later? Will there be any bone recession for that patient? Maybe, but maybe not. If there is bone recession, will it recede only to the top of narrow neck 14 on the implant? Maybe. If there is bone recession, will it recede to somewhere in the middle of the narrow neck 14 on the implant? Maybe. If there is bone recession, will it recede all the way down to the third thread? Maybe.

In short, one major flaw with the Examiner's reasoning regarding the alleged motivation to combine Beaty and Lazzara is that the Examiner suggests the skilled artisan desires an implant analog that replicates the implant's "steady structure" condition below the implant's upper

surface to develop a more accurate prosthesis. Yet, Lazzara makes it abundantly clear that it is impossible to determine at the time of modeling (when the implant analog is used) what the "steady state" condition will be for that patient. If the Examiner's proposed analog were modified to include this groove and the Examiner is desiring an implant analog that mimics the steady state condition, then more times than not, the Examiner's proposed implant analog will **not** mimic the implant's "steady state" condition below the upper surface of the implant.

But, the biggest flaw in the Examiner's reasoning is the concept that the skilled artisan desires an implant analog that mimics the implant's structure below the upper surface of the implant. As Beaty teaches, the "analog must have a thread bore 20' and a non-round boss 22' that are identical to the bore 20 and boss 22 of the implant 10." Col. 4, lines 42-46. Beaty, of course, mentions nothing about the need for the analog having structure below its upper surface that is identical to structure on the implant. And there is a perfectly good reason why Beaty does not mention this fact – the **only** purpose for the stone model, the soft tissue material, and the analog is to develop the final prosthetic tooth, which extends **above** the analog, not below it. If the prosthetic tooth only extends **above** the upper surface of the implant analog, then there is no reason to mimic any structure of the implant below the upper surface of the implant analog. For example, see the prosthetic tooth 60 in FIG. 5 of Beaty.

The Examiner's position is that a more accurate prosthesis could be created if the "steady state" bone-recessed condition is modeled. This position, however, is not correct. Again, the prosthesis is to extend **above** the upper surface of the implant. It will **never** extend below the upper surface. Consequently, attempting to mimic on an implant analog any implant structure

(such as the narrow neck 14) that is below the implant's upper surface is a waste of time and money.

Perhaps the Examiner is suggesting to develop a "more accurate prosthetic tooth" that extends below the upper surface on the implant, filling the indeterminable bone-recessed region. If that is the case, then the Examiner must again consider that the bone will not recede, if it recedes at all, until a long time after installation of the prosthetic tooth. Hence, any hypothetical "accurate prosthetic tooth" would engage the unrecessed bone when it is initially installed on the implant, which is clinically unacceptable.

In summary, the stated motivation and accompanying positions set forth by the Examiner to reject the claims fails to consider the important fact that the analog's configuration below its upper surface is **irrelevant** for creating the prosthetic tooth. As such, why would the skilled artisan desire an analog that mimics any structure (such as the narrow neck 14) below the implant's upper surface? Doing so would simply be an unnecessary and wasted manufacturing step. As the Examiner is aware, the simple fact that references **could be** combined is not sufficient for establishing a *prima face* case of obviousness. MPEP § 2143.01. Obviousness can only be established by combining two prior art references to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found in (i) in the references themselves or (ii) in the knowledge generally available to one of ordinary skill in the art. MPEP § 2143.01. Here, there is no teaching, suggestion, or motivation in Beaty or Lazarra to modify a standard analog below its upper surface so as to mimic the implant's structure below the implant's upper surface. As such, the Examiner must be obtaining this teaching, suggestion, or motivation from what the Examiner believes is the knowledge generally available to one of

ordinary skill in the art. For the reasons described above, there is no such knowledge generally available to the skilled artisan.

Consequently, Applicant respectfully requests reconsideration of the rejections.

Conclusion

It is the Applicant's belief that all of the claims are now in condition for allowance and action towards that effect is respectfully requested.

If there are any matters which may be resolved or clarified through a telephone interview, the Examiner is requested to contact the undersigned attorney at the number indicated.

Respectfully submitted,

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